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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/615,574	07/13/2000	Jeremy Wertheimer	09765-015001	4957

7590

11/05/2002

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EXAMINER

ROBINSON BOYCE, AKIBA K

ART UNIT

PAPER NUMBER

3623

DATE MAILED: 11/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/615,574

Applicant(s)

WERTHEIMER ET AL.

Examiner

Akiba K Robinson-Boyce

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 July 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 17-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim, the recited process must somehow apply, involve, use, or advance the technological arts.

In the present case, independent claim 17 is directed towards predicting relative, competitive availability of seating on an airline flight. Claim 17 recites the steps of "predicting seating availability on a competitive flight", "providing an actual

availability response for a flight” and “comparing the predicted answer from the availability predictor and the potential answer from the availability system to establish a decision with respect to actual availability”. These steps represent mere ideas in the abstract because they do not disclose any type of means or technology to carry out or perform the method steps and therefore are found to be non-statutory subject matter. The claims that depend on independent claim 17 are therefore found to be non-statutory as well since they also do not disclose any type of means or technology to carry out or perform the method steps.

Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result. In this case, claim 17 produces a useful, concrete, and tangible result by disclosing the “comparing the predicted answer from the availability predictor and the potential answer from the availability system to establish a decision with respect to actual availability” step. However, since claims 17-20 are not within the technological arts, these claims are still non-statutory.

### ***Claim Objections***

3. Claim 20 is objected to because of the following informalities: Claim 20 is a system claim, however, it depends on claim 17, which is a method claim. For proper dependency, a system claim must depend on a system claim and a method claim must depend on a method claim. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 17 are rejected under 35 U.S.C. 103(a) as being obvious over Gaspard, II (US Patent 6,411,897 B1).

As per claims 1, 17, Gaspard, II discloses:

An availability predictor that predicts seating availability on a competitive flight/predicting seating availability...(Col. 7, lines 64-65, here Gaspard, II predicts arrival and departure times. However, the arrival and departure times are analogous to the seating availability because first, Col. 11, lines 17-21 shows that seating availability is determined for each transportation request. In addition, Fig 2, [210] shows that transportation requests are received in order to create a route in order to predict the arrival/departure times. Therefore, the prediction of the seating availability is needed to predict the arrival/departure times and in Gaspard, II, they both work hand in hand).

An availability system that produces an actual availability response for a flight/providing an actual availability response...(Col. 3, lines 55-57, here Gaspard, II

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determines actual arrival and departure times. As explained above, the arrival and departure times are analogous to the seating availability because first, Col. 11, lines 17-21 shows that seating availability is determined for each transportation request. In addition, Fig 2, [210] shows that transportation requests are received in order to create a route in order to predict the arrival/departure times. Therefore, the prediction of the seating availability is needed to predict the arrival/departure times and in Gaspard, II, they both work hand in hand);

Decision logic that compares the predicted answer from the availability predictor and the potential answer from the availability system to establish a decision with respect to actual availability system to establish a decision with respect to actual availability/comparing the predicted answer...(Col. 10, lines 60-63 w/Col. 3, lines 57-61).

6. Claims 4-10 are rejected under 35 U.S.C. 103(a) as being obvious over Gaspard, II (US Patent 6,411,897 B1) in further view of Lynch et al (US Patent 6,018,715).

As per claim 4, Gaspard, II fails to disclose the following, however Lynch et al 715' discloses:

Wherein the decision logic determines whether the prediction from the availability predictor indicates that a competitor is in a more favorable or less favorable competitive position than the answer produced by the availability system (Col. 7, lines 17-40, where the decision logic is represented as fuzzy logic [representations] in Lynch et al and they determine that Delta Airlines, American Airlines and Continental Airlines [all competitors] have different logic values which are weighted according to

preferred plan).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to determine whether the prediction from the availability predictor indicates that a competitor is in a more favorable or less favorable competitive position with the motivation of determining the best travel arrangement according to the traveler's preferences and satisfying the traveler as a customer.

As per claim 5, Gaspard, II fails to disclose the following, however Lynch et al 715' discloses:

Wherein the decision as to an actual availability answer is based on the message from the decision logic (Col. 6, lines 7-28, where the decision as to an actual availability answer is represented by the fuzzy solutions which specify the traveler's preferred travel plan which is based on the fuzzy representations in Lynch et al [analogous to the message of the present invention]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to base the actual availability answer on the message from the decision logic with the motivation of using logical reasoning to logically and accurately determine an available preferred travel plan.

As per claim 6, Gaspard, II fails to disclose the following, however Lynch et al 715' discloses:

Wherein the message from the decision logic can have a plurality of states (Col. 6, lines 10-25, where Lynch et al shows that the states are represented by values which range from 0 to 1).

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It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for the message from the decision logic to have a plurality of states with the motivation of representing a wide range of values that represent or define various states in which availability may or may not be possible. This would give the traveler a better idea of the travel plan that would most likely take place.

As per claim 7, Gaspard, II fails to disclose the following, however Lynch et al 715' discloses:

Wherein one of the states includes a neutral state that is does not tend to modify the potential answer received from the availability system (Col. 6, lines 15-16 w/ Abstract, lines 5-8, where this neutral state is represented by the intermediate values. For example, .5 would be in between [50% true, 50% false] and would be a neutral state).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for the state to include a neutral state with the motivation of keeping the travel plan the same without making any modifications).

As per claim 8, Gaspard, II fails to disclose the following, however Lynch et al 715' discloses:

Wherein one of states biases a potential answer towards answering that seat is available (Col. 6, line 14 w/ Abstract, lines 5-8, where this state is represented by the value of 1. This value represents completely true [the traveler plan according to traveler preferences is available]).

It would have been obvious to one of ordinary skill in the art at the time of the



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applicant's invention for there to be a state which biases a potential answer towards answering that seat is available with the motivation of allowing the traveler to determine that he/she will be able to book a particular seat when traveling.

As per claim 9, Gaspard, II fails to disclose the following, however Lynch et al 715' discloses:

Wherein one of states biases a potential answer towards answering that seat is not available (Col. 6, lines 14-15 w/ Abstract, lines 5-8, where this state is represented by the value of 0. This value represents completely false [the traveler plan according to traveler preferences is not available]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for there to be a state which biases a potential answer towards answering that seat is not available with the motivation of allowing the traveler to determine that he/she will not be able to book a particular seat when traveling.

As per claim 10, Gaspard, II fails to disclose the following, however Lynch et al 715' discloses:

Wherein state depends upon the relative competitive position of the competitor represented by the availability predictor (Col. 6, lines 7-14 w/ abstract, lines 1-9, esp. lines 8-9, where the competitor is analogous to the preferred travel vendor).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for the state to depend upon the relative competitive position of the competitor represented by the availability predictor with the motivation of determining the best competitor that fits the traveler's preference.

7. Claims 2, 3, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaspard, II (US Patent 6,411,897) in further view of Lynch et al (US 6,018,715), and in further view of Lynch et al (US 5,839,114).

As per claims 2, 3, 18, 19, both Gaspard, II and Lynch et al '715 fail to disclose the following, however Lynch et al '114 discloses:

Wherein the decision of the decision logic is a bias that determines whether the potential answer should be modified based upon the relative competitive position of the competitor represented by the availability predictor/Modifying logic that is responsive to the availability response from the availability system and from the bias from the decision logic to modify the actual availability answer in accordance with the bias from the decision logic to modify the actual availability answer in accordance with the bias/wherein comparing produces a decision that is a bias that determines whether the potential answer should be modified.../modifying the actual availability...(Col. 7, line 66-Col. 8, line 26).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to determine whether the potential answer should be modified based upon the relative competitive position of the competitor represented by the availability predictor and to actually modify the actual availability answer with the motivation of providing a fair and balanced travel arrangement through updating and making changes to the travel plan.

8. Claims 11 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaspard, II (US Patent 6,411,897) in further view of Lynch et al (US 6,018,715),

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and in further view of Lynch et al (US 6,119,094).

As per claims 11, 20, both Gaspard, II and Lynch et al '715 fail to disclose the following, however Lynch et al '094 discloses:

Wherein the decision logic determines whether the competitor's available booking codes are at a lower price than those which the availability system indicated the user of the system can offer/determining whether the competitor's available booking codes are at a lower price...(Col. 3, lines 59-63).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to determine whether the competitor's available booking codes are at a lower price than those which the availability system indicates the user of the system can offer with the motivation of accessing the travel arrangement that would be cheapest for the customer.

As per claims 12, 13, both Gaspard, II and Lynch et al '715 fail to disclose the following, however Lynch et al '094 discloses:

Wherein if the competitor's available booking codes are not at a lower price, then the system can return a bias towards making the seat unavailable/wherein if the competitor's available booking codes are not at a lower price, then the system can test whether the original query was for a low cost fare and return a bias towards making the seat not available (Col. 8, lines 27-32).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to return a bias towards making a seat unavailable if the booking codes are not at a lower price with the motivation of not going outside of a price range

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and subjecting the customer to unnecessary costs.

As per claims 14, 15, both Gaspard, II and Lynch et al '715 fail to disclose the following, however Lynch et al '094 discloses:

Wherein if the competitor's available booking codes are at a lower price than those being offered by the user of the system, the system returns a bias towards making the seat available/wherein if the competitor's available booking codes are at a lower price than those being offered by the user of the system, the system determines whether the query was for a high cost fare, and returns a bias towards making the seat available if for a high cost fare(Col. 7, line 29-Col. 8, line 17).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to make seating available if booking codes are at a lower price with the motivation of providing the customer with the best rates for a travel arrangement.

As per claim 16, Gaspard, II fails to disclose the following, however Lynch et al '715 discloses:

Wherein the messages that are returned change the availability message from the availability system (Col. 6, lines 25-34).

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is

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703-305-1340. The examiner can normally be reached on Monday-Friday 8:30 am-5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 703-305-9643. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



A. R. B.  
October 29, 2002



TARIQ R. HAFIZ  
SUPERVISORY PATENT EXAMINER  
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